Aircraft Manufacturer Hynes Helicopter

Aircraft Engine Manufacturer Avco Lycoming (IVO-360-A1A)

No. of Engines 1 Engine Rating 180 HP

Minimum Take-Off Weight 1.25 k-lb

Maximum Take-Off Weight Peace-Time 1.67 k-lb

Maximum Take-Off Weight War-Time 1.67 k-lb

Maximum Landing Weight 1.67 k-lb

Hover Ceiling (In Ground Effect) 6,700 ft

Hover Ceiling (Out of Ground Effect) †

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
1,670 lb/30 psi**								

** The relative structural effect of an aircraft with a weight less than 12,500 pounds is reported as maximum aircraft weight and maximum tire pressure.

Figure A-532. Hynes H-2/with wheel landing gear

Aircraft Manufacturer Hynes Helicopter

Aircraft Engine Manufacturer Avco Lycoming (IVO-540-B1A)

No. of Engines 1 Engine Rating 305 HP

Minimum Take-Off Weight 2.05 k-lb

Maximum Take-Off Weight Peace-Time 2.9 k-lb

Maximum Take-Off Weight War-Time 2.9 k-lb

Maximum Landing Weight 2.9 k-lb

Hover Ceiling (In Ground Effect) 4,080 ft

Hover Ceiling (Out of Ground Effect) †

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: The relative structural effect of an aircraft is not expressed for a skid equipped helicopter. This aircraft may damage AC pavement surfaces during hot weather.

Figure A-533. Hynes H-5/with skid landing gear

Aircraft Manufacturer Hynes Helicopter

Aircraft Engine Manufacturer Avco Lycoming (IVO-540-B1A)

No. of Engines 1 Engine Rating 305 HP

Minimum Take-Off Weight 2.05 k-lb

Maximum Take-Off Weight Peace-Time 2.9 k-lb

Maximum Take-Off Weight War-Time 2.9 k-lb

Maximum Landing Weight 2.9 k-lb

Hover Ceiling (In Ground Effect) 4,080 ft

Hover Ceiling (Out of Ground Effect) †

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
2,900 lb/†**								

** The relative structural effect of an aircraft with a weight less than 12,500 pounds is reported as maximum aircraft weight and maximum tire pressure.

Figure A-534. Hynes H-5/with wheel landing gear

Aircraft Manufacturer Messerschmitt-Bolkow-Blohm

Aircraft Engine Manufacturer Allison (250-C20B)

No. of Engines 2 Engine Rating 420 SHP

Minimum Take-Off Weight 3.26 k-lb

Maximum Take-Off Weight Peace-Time 5.29 k-lb

Maximum Take-Off Weight War-Time 5.51 k-lb

Maximum Landing Weight 5.51 k-lb

Hover Ceiling (In Ground Effect) 8,400 ft (At 5.29 k-lb)

Hover Ceiling (Out of Ground Effect) 5,200 ft (At 5.29 k-lb)

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: The relative structural effect of an aircraft is not expressed for a skid equipped helicopter. This aircraft may damage AC pavement surfaces during hot weather.

Figure A-535. MBB BO 105 CB

Aircraft Manufacturer Messerschmitt-Bolkow-Blohm

Aircraft Engine Manufacturer Allison (250-C28C)

No. of Engines 2 Engine Rating 550 SHP

Minimum Take-Off Weight 3.43 k-lb

Maximum Take-Off Weight Peace-Time 5.73 k-lb

Maximum Take-Off Weight War-Time 5.73 k-lb

Maximum Landing Weight 5.73 k-lb

Hover Ceiling (In Ground Effect) 11,500 ft

Hover Ceiling (Out of Ground Effect) 8,370 ft

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: The relative structural effect of an aircraft is not expressed for a skid equipped helicopter. This aircraft may damage AC pavement surfaces during hot weather.

Figure A-536. MBB BO 105 CBS

Aircraft Manufacturer Messerschmitt-Bolkow-Blohm/Kawasaki

Aircraft Engine Manufacturer Avco Lycoming (LTS 101-650B-1)

No. of Engines 2 Engine Rating 592 SHP

Minimum Take-Off Weight 3.74 k-lb

Maximum Take-Off Weight Peace-Time 7.06 k-lb

Maximum Take-Off Weight War-Time 7.06 k-lb

Maximum Landing Weight 7.06 k-lb

Hover Ceiling (In Ground Effect) 5,000 ft

Hover Ceiling (Out of Ground Effect) 0 ft

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: The relative structural effect of an aircraft is not expressed for a skid equipped helicopter. This aircraft may damage AC pavement surfaces during hot weather.

Figure A-537. HEB BO 105 LS

Aircraft Manufacturer Messerschmitt-Bolkow-Blohm/Kawasaki

Aircraft Engine Manufacturer Avco Lycoming (LTS 101-650B-1)

No. of Engines 2 Engine Rating 592 SHP

Minimum Take-Off Weight 3.74 k-lb

Maximum Take-Off Weight Peace-Time 7.06 k-lb

Maximum Take-Off Weight War-Time 7.06 k-lb

Maximum Landing Weight 7.06 k-lb

Hover Ceiling (In Ground Effect) 5,000 ft

Hover Ceiling (Out of Ground Effect) 0 ft

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: The relative structural effect of an aircraft is not expressed for a skid equipped helicopter. This aircraft may damage AC pavement surfaces during hot weather.

Figure A-538. MBB/Kawasaki BK 117

Aircraft Manufacturer McDonnell Douglas

Aircraft Engine Manufacturer General Electric (T700-GE-701)

No. of Engines 2 Engine Rating 1694 SHP

Minimum Take-Off Weight 11.8 k-lb

Maximum Take-Off Weight Peace-Time 14.4 k-lb

Maximum Take-Off Weight War-Time 21.0 k-lb

Maximum Landing Weight 21.0 k-lb

Hover Ceiling (In Ground Effect) 15,000 ft (At 14.4 k-lb)

Hover Ceiling (Out of Ground Effect) 11,500 ft (At 14.4 k-lb)

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
12	4	4	4	4	3	4	4	4
14	4	4	4	4	3	4	4	4
21	6	6	6	6	6	6	7	7

Figure A-539. McDonnell Douglas 77 (AH-64A), Apache

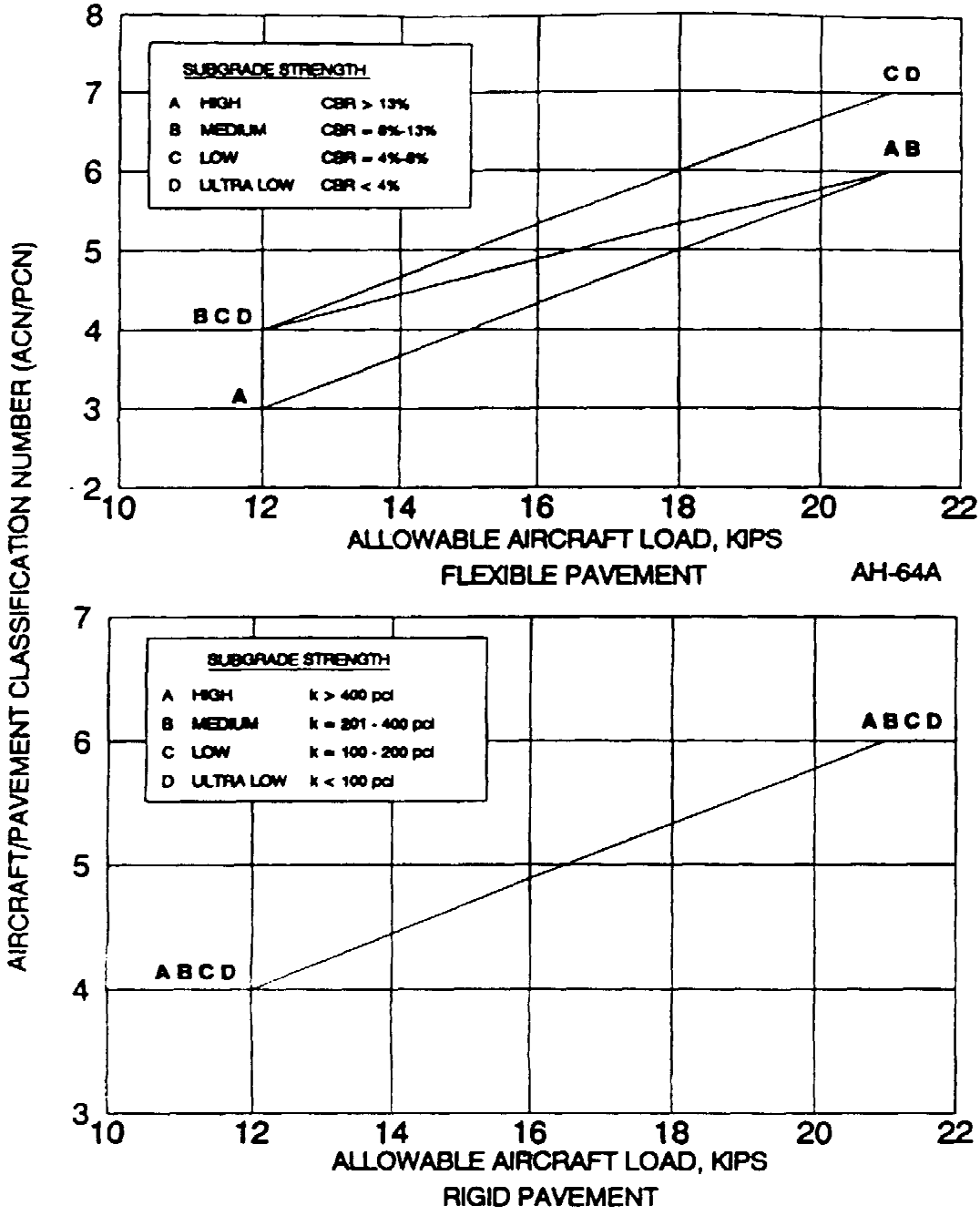

Figure A-540. McDonnell Douglas 77 (AH-64A), ACN/PCN Curves

Aircraft Manufacturer McDonnell Douglas (formerly manufactured by Hughes Aircraft)

Aircraft Engine Manufacturer Allison (T63-A-5A)

No. of Engines 1 Engine Rating 317 SHP

Minimum Take-Off Weight 1.69 k-lb

Maximum Take-Off Weight Peace-Time 2.4 k-lb

Maximum Take-Off Weight War-Time 2.7 k-lb

Maximum Landing Weight 2.4 k-lb

Hover Ceiling (In Ground Effect) 11,800 ft (At 2.4 k-lb)

Hover Ceiling (Out of Ground Effect) 7,300 ft (At 2.4 k-lb)

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: The relative structural effect of an aircraft is not expressed for a skid equipped helicopter. This aircraft may damage AC pavement surfaces during hot weather.

Figure A-541. McDonnell Douglas 500 (OH-6A), Cayuse

Aircraft Manufacturer McDonnell Douglas (formerly manufactured by Hughes Aircraft)

Aircraft Engine Manufacturer Allison (250-C20B)

No. of Engines 1 Engine Rating 420 SHP

Minimum Take-Off Weight 1.61 k-lb

Maximum Take-Off Weight Peace-Time 3.0 k-lb

Maximum Take-Off Weight War-Time 3.0 k-lb

Maximum Landing Weight 3.0 k-lb

Hover Ceiling (In Ground Effect) 9,000 ft

Hover Ceiling (Out of Ground Effect) 7,000 ft

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: The relative structural effect of an aircraft is not expressed for a skid equipped helicopter. This aircraft may damage AC pavement surfaces during hot weather.

Figure A-542. McDonnell Douglas 500D

Aircraft Manufacturer McDonnell Douglas

Aircraft Engine Manufacturer Allison (250-C30)

No. of Engines 1 Engine Rating 650 SHP

Minimum Take-Off Weight 1.85 k-lb

Maximum Take-Off Weight Peace-Time 3.1 k-lb

Maximum Take-Off Weight War-Time 3.75 k-lb
(With external load)

Maximum Landing Weight 3.1 k-lb

Hover Ceiling (In Ground Effect) 14,200 ft
(At 3.1 k-lb)

Hover Ceiling (Out of Ground Effect) 12,000 ft
(At 3.1 k-lb)

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: The relative structural effect of an aircraft is not expressed for a skid equipped helicopter. This aircraft may damage AC pavement surfaces during hot weather.

Figure A-543. McDonnell Douglas 530F

Aircraft Manufacturer Robinson Helicopter Co.

Aircraft Engine Manufacturer Avco Lycoming (O-320-B2C)

No. of Engines 1 Engine Rating 160 SHP

Minimum Take-Off Weight 1.0 k-lb

Maximum Take-Off Weight Peace-Time 1.37 k-lb

Maximum Take-Off Weight War-Time 1.37 k-lb

Maximum Landing Weight 1.37 k-lb

Hover Ceiling (In Ground Effect) 7,000 ft

Hover Ceiling (Out of Ground Effect) 5,200 ft

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: The relative structural effect of an aircraft is not expressed for a skid equipped helicopter. This aircraft may damage AC pavement surfaces during hot weather.

Figure A-544. Robinson R22

Aircraft Manufacturer Rogerson Hiller Corp.

Aircraft Engine Manufacturer Allison (250-C18)

No. of Engines 1 Engine Rating 317 SHP

Minimum Take-Off Weight 1.9 k-lb

Maximum Take-Off Weight Peace-Time 2.75 k-lb

Maximum Take-Off Weight War-Time 2.75 k-lb

Maximum Landing Weight 2.75 k-lb

Hover Ceiling (In Ground Effect) 13,400 ft

Hover Ceiling (Out of Ground Effect) 8,400 ft

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: The relative structural effect of an aircraft is not expressed for a skid equipped helicopter. This aircraft may damage AC pavement surfaces during hot weather.

Figure A-545. Rogerson Hiller RH-1100

Aircraft Manufacturer Rogerson Hiller Corp.

Aircraft Engine Manufacturer Avco Lycoming (VO-540-C2A)

No. of Engines 1 Engine Rating 340 HP

Minimum Take-Off Weight 2.02 k-lb

Maximum Take-Off Weight Peace-Time 3.1 k-lb

Maximum Take-Off Weight War-Time 3.1 k-lb

Maximum Landing Weight 3.1 k-lb

Hover Ceiling (In Ground Effect) 10,400 ft

Hover Ceiling (Out of Ground Effect) 6,800 ft

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: The relative structural effect of an aircraft is not expressed for a skid equipped helicopter. This aircraft may damage AC pavement surfaces during hot weather.

Figure A-546. Rogerson Hiller UH-12E

Aircraft Manufacturer Rogerson Hiller Corp.

Aircraft Engine Manufacturer Avco Lycoming (VO-540-C2A)

No. of Engines 1 Engine Rating 340 HP

Minimum Take-Off Weight 2.09 k-lb

Maximum Take-Off Weight Peace-Time 3.1 k-lb

Maximum Take-Off Weight War-Time 3.1 k-lb

Maximum Landing Weight 3.1 k-lb

Hover Ceiling (In Ground Effect) 10,400 ft

Hover Ceiling (Out of Ground Effect) 6,800 ft

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: The relative structural effect of an aircraft is not expressed for a skid equipped helicopter. This aircraft may damage AC pavement surfaces during hot weather.

Figure A-547. Rogerson Hiller UH-12E4

Aircraft Manufacturer Rogerson Hiller Corp.

Aircraft Engine Manufacturer Allison (250-C20B)

No. of Engines 1 Engine Rating 420 HP

Minimum Take-Off Weight 1.92 k-lb

Maximum Take-Off Weight Peace-Time 3.1 k-lb

Maximum Take-Off Weight War-Time 3.1 k-lb

Maximum Landing Weight 3.1 k-lb

Hover Ceiling (In Ground Effect) 12,000 ft

Hover Ceiling (Out of Ground Effect) 7,000 ft

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: The relative structural effect of an aircraft is not expressed for a skid equipped helicopter. This aircraft may damage AC pavement surfaces during hot weather.

Figure A-548. Rogerson Hiller UH-l2ET

Aircraft Manufacturer Rogerson Hiller Corp.

Aircraft Engine Manufacturer Allison (250-C20B)

No. of Engines 1 Engine Rating 420 SHP

Minimum Take-Off Weight 1.92 k-lb

Maximum Take-Off Weight Peace-Time 3.1 k-lb

Maximum Take-Off Weight War-Time 3.1 k-lb

Maximum Landing Weight 3.1 k-lb

Hover Ceiling (In Ground Effect) 12,000 ft

Hover Ceiling (Out of Ground Effect) 7,000 ft

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: The relative structural effect of an aircraft is not expressed for a skid equipped helicopter. This aircraft may damage AC pavement surfaces during hot weather.

Figure A-549. Rogerson Hiller UH-12E4T

Aircraft Manufacturer Schweizer Aircraft (formerly manufactured by Hughes Aircraft)

Aircraft Engine Manufacturer Lycoming (HIO-360-B1A)

No. of Engines 1 Engine Rating 180 HP

Minimum Take-Off Weight 1.27 k-lb

Maximum Take-Off Weight Peace-Time 1.67 k-lb

Maximum Take-Off Weight War-Time 1.85 k-lb

Maximum Landing Weight 1.67 k-lb

Hover Ceiling (In Ground Effect) 5,500 ft (At 1.67 k-lb)

Hover Ceiling (Out of Ground Effect) 3,750 ft (At 1.67 k-lb)

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: The relative structural effect of an aircraft is not expressed for a skid equipped helicopter. This aircraft may damage AC pavement surfaces during hot weather.

Figure A-550. Schweizer 269A (TH-55A), Osage

Aircraft Manufacturer Schweizer Aircraft (formerly manufactured by Hughes Aircraft)

Aircraft Engine Manufacturer Lycoming (HIO-360-D1A)

No. of Engines 1 Engine Rating 210 HP

Minimum Take-Off Weight 1.4 k-lb

Maximum Take-Off Weight Peace-Time 2.05 k-lb

Maximum Take-Off Weight War-Time 2.05 k-lb

Maximum Landing Weight 2.05 k-lb

Hover Ceiling (In Ground Effect) 5,800 ft

Hover Ceiling (Out of Ground Effect) 2,200 ft

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D

Note: The relative structural effect of an aircraft is not expressed for a skid equipped helicopter. This aircraft may damage AC pavement surfaces during hot weather.

Figure A-551. Schweizer 300C

Aircraft Manufacturer Sikorsky Aircraft

Aircraft Engine Manufacturer Wright (R-1820-84B/D)

No. of Engines 1 Engine Rating 1525 HP

Minimum Take-Off Weight 8.6 k-lb

Maximum Take-Off Weight Peace-Time 13.0 k-lb

Maximum Take-Off Weight War-Time 14.0 k-lb

Maximum Landing Weight 13.0 k-lb

Hover Ceiling (In Ground Effect) 4,900 ft (At 13.0 k-lb)

Hover Ceiling (Out of Ground Effect) 2,400 ft (At 13.0 k-lb)

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
9	2	2	2	2	2	2	2	2
13	3	3	3	3	3	3	3	4
14	3	3	3	3	3	3	3	4

Figure A-552. Sikorsky S-58T

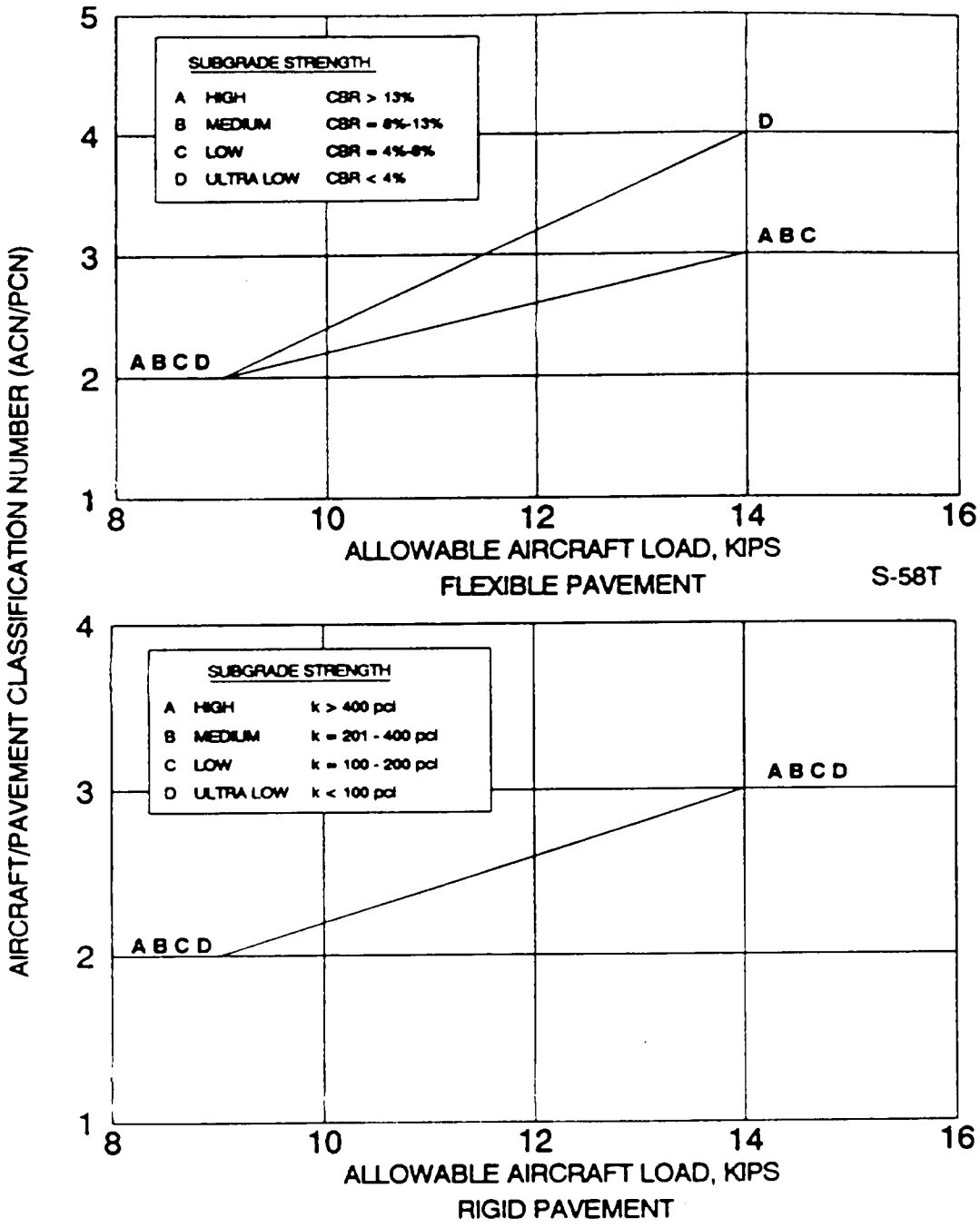

Figure A-553. Sikorsky S-58T, ACN/PCN Curves

Aircraft Manufacturer Sikorsky Aircraft

Aircraft Engine Manufacturer General Electric (CT58-140-1)

No. of Engines 2 Engine Rating 1500 SHP

Minimum Take-Off Weight 14.1 k-lb

Maximum Take-Off Weight Peace-Time 20.5 k-lb

Maximum Take-Off Weight War-Time 22.0 k-lb
(With external load)

Maximum Landing Weight 20.5 k-lb

Hover Ceiling (In Ground Effect) 8,700 ft
(At 20.5 k-lb)

Hover Ceiling (Out of Ground Effect) 3,800 ft
(At 20.5 k-lb)

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
14	3	3	3	3	2	2	2	3
21	4	4	4	4	2	3	4	5
22	5	5	5	5	2	3	4	5

Figure A-554. Sikorsky S-61N

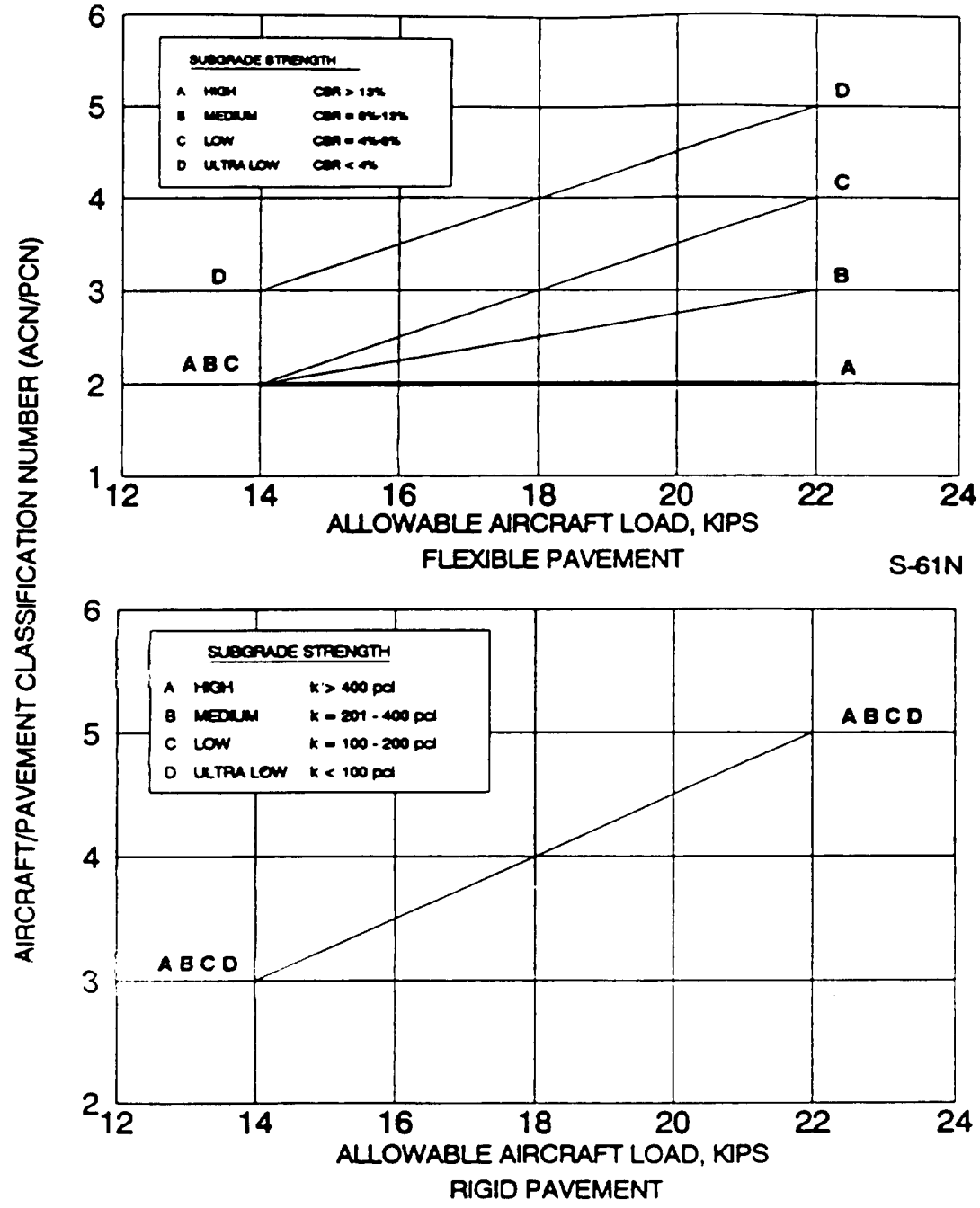

Figure A-555. Sikorsky S-61N, ACN/PCN Curves

Aircraft Manufacturer Sikorsky Aircraft

Aircraft Engine Manufacturer General Electric (CT58-110-1)

No. of Engines 1 Engine Rating 1250 SHP

Minimum Take-Off Weight 6.05 k-lb

Maximum Take-Off Weight Peace-Time 7.9 k-lb

Maximum Take-Off Weight War-Time 8.0 k-lb
(With sling load)

Maximum Landing Weight 7.9 k-lb

Hover Ceiling (In Ground Effect) 14,100 ft
(At 7.9 k-lb)

Hover Ceiling (Out of Ground Effect) 4,600 ft
(At 7.9 k-lb)

ACN

	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
Weight	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
8,000 lb/70 psi**								

** The relative structural effect of an aircraft with a weight less than 12,500 pounds is reported as maximum aircraft weight and maximum tire pressure.

Figure A-556. Sikorsky S-62